

REMARKS/ARGUMENTS

The amendments and remarks hereto attend to all outstanding issues in the pending office action of 21 November, 2008. Claims 1-37 are pending in this application before the amendments herein. Claims 1, 7, 9, 12-15, 22 and 32-33 are amended. Claims 5, 17 and 31 are canceled. Claims 38, 39 and 40 are new.

In the Claims

Claim 1 is amended to incorporate the limitations of claim 5 as filed. Claim 5 was objected to by the Examiner as being dependent upon a rejected base claim, but was indicated as allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and overcoming any claim objections. Therefore claim 1 is now written as if claim 5 had been so rewritten. Claim 1 and other claims that depend therefrom should be allowable without any further search or consideration by the Examiner.

Claim 7 is amended to depend from claim 6 instead of from claim 5, which is now canceled.

Claims 12 - 14 are amended to depend from claim 11 instead of from claim 9, to provide antecedent support for terms used therein.

Claim 15 is amended to incorporate the limitations of claim 17 as filed. Claim 17 was objected to by the Examiner as being dependent upon a rejected base claim, but was indicated as allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and overcoming any claim objections. Therefore claim 15 is now written as if claim 17 had been so rewritten. Claim 15 and other claims that depend therefrom should be allowable without any further search or consideration by the Examiner. Claim 17 is canceled.

Claim 22 is amended to change the word "modifying" to "encoding" for antecedent consistency with claim 15 from which it depends.

Claim 31 is canceled, and claims 32-33 are amended to depend from claim 1 instead of claim 31.

New claim 38 includes the subject matter of claims 1, 6 and 7. Claim 38 finds support in claims 1, 6 and 7 as originally filed, and in paragraph [0008] of the specification. Claim 38 is believed patentable over the art of record because of the indicated allowability of claim 7 in the present Office Action if amended to incorporate the limitations of its base claim and any intervening claims. Claims 1 and 6 are such base claim and intervening claim. New claims 39 and 40 depend from new claim 38, argued above as allowable, and find support in claims 8 and 11 as originally filed, and in paragraphs [0018], [0021] and [0029] of the specification.

No new matter is added to the application by any of the claim amendments.

Response to Office Action

The following paragraphs follow the order of the paragraphs in the Office Action mailed 21 November 2008 in this application.

1. Double Patenting

Claim 5 stands objected to by the Examiner as being a substantial duplicate of claim 31. Claim 31 is canceled herewith. Reconsideration and withdrawal of the double patenting objection is respectfully requested.

2. and 3. Claim Objections

Claims 12-14 and 22 stand objected to by the Examiner as lacking antecedent basis for certain terms used therein. Claims 12 - 14 are amended to depend from claim 11 instead of from claim 9, which is believed sufficient to provide antecedent support for the term "non-linear digital detector" used therein. Claim 22 is amended to change the word "modifying" to "encoding" for antecedent consistency with claim 15 from which it depends. Reconsideration and withdrawal of the claim objection is respectfully requested.

4. and 5. Claim Rejections - 35 USC §102

Claims 15, 16, 20 and 22 stand rejected as anticipated by U.S. Patent No. 6,097,856 ("Hammond"). Claim 15 is amended to include the limitations of claim 17, which combination is acknowledged by the Examiner as allowable over the art of record. Claims 16, 20 and 22 depend from claim 15 and should likewise be seen as patentable. Reconsideration and withdrawal of the rejections of claims 15, 16, 20 and 22 under 35 U.S.C. §102(b) is respectfully requested.

6. - 11. Claim Rejections - 35 USC §103

Claims 1-4 and 8 stand rejected as unpatentable over U.S. Patent No. 5,748,371 ("Cathey") in view of U.S. Patent No. 5,143,573 ("Goodwin"). Claim 6 stands rejected as unpatentable over Cathey and Goodwin in view of U.S. Patent No. 6,653,613 ("Bucourt"). Claim 11 stands rejected as unpatentable over Cathey and Goodwin in view of U.S. Patent No. 3,988,608 ("O'Meara"). Claim 21 stands rejected as unpatentable over Hammond in view of Cathey. Claim 1 is amended to incorporate the limitations of claim 5, which combination is acknowledged by the Examiner as allowable over the art of record. Claims 2-4, 6, 8 and 11 depend directly or indirectly from claim 1 and should likewise be seen as patentable. Claim 21 depends from claim 15, argued above as patentable, and should likewise be seen as patentable. Reconsideration and withdrawal of the rejections of claims 1-4 and 8 under 35 U.S.C. §103 is respectfully requested.

12. - 14. Allowable Subject Matter

Applicants appreciate the Examiner's acknowledgement of the allowability of claims 5, 7, 9, 10, 12-14 and 17-19 if rewritten as independent claims incorporating all of the limitations of the respective base claims and intervening claims. As noted above, the subject matter of claims 5 and 17 has been respectively added to independent claims 1 and 15 to make the independent claims, and all claims that depend from them, allowable. The subject matter of claims 1, 6 and 7 has been combined to form new claim 38 to make it, and new claims 39 and 40 depending therefrom, allowable.

Conclusion

In view of the above Amendments and Remarks, Applicant has addressed all issues raised in the Office Action dated 21 November 2008, and respectfully solicits a Notice of Allowance. Should any issues remain, the Examiner is encouraged to telephone the undersigned.

No excess claim fees are believed necessary with the one independent and two dependent new claims submitted herein, because one independent and two dependent claims are also canceled herein. Since this response is submitted timely, Applicant believes no fees are currently due, however, if any fee is deemed necessary in connection with this Amendment and Response, please charge Deposit Account No. 12-0600.

Respectfully submitted,

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